RTIP ID# *(required)* LAE0688

Project Description *(clearly describe project)*
The City of Carson, in cooperation with Caltrans District 7, proposes to widen Wilmington Avenue, from 223rd Street to 220th Street (0.27 mile), and the I-405 ramps within the project limits, to enhance their capacity, reduce conflicting movements, and alleviate the existing congestion. Two Build Alternatives are considered. The difference between the two is that in proposed Alternative 2 a new on-ramp would be provided to serve the traffic moving from S/B Wilmington Avenue to N/B I-405. It would be constructed within the existing right-of-way (ROW) northwest of the interchange. The ramp would not carry a large volume of traffic, but it would eliminate the S/B Wilmington Avenue left turns at the existing N/B I-405 ramp intersection, thus improving traffic flow along Wilmington Avenue. It would also reduce the weaving distance between the I-405/Wilmington Avenue interchange and the Carson Street interchange to the north.

Type of Project *(use Table 1 on instruction sheet)*
Change to existing regionally significant street; and interchange reconfiguration.

County	**Narrative Location/Route & Postmiles**
Los Angeles	Widen Wilmington Avenue from 223rd street including I-405 ramp modification. Improve Wilmington Avenue/I-405 Interchange by adding a new northbound on-ramp and widening of Wilmington. PM 9.30/9.89 **Caltrans Projects – EA#** 07186-234000

Lead Agency: Caltrans District 7

Contact Person	**Phone#**	**Fax#**	**Email**
Hamid R. Toossi	(213) 897-2923		Hamid_R_Toossi@dot.ca.gov

Hot Spot Pollutant of Concern *(check one or both)* **PM2.5** √ **PM10** √

Federal Action for which Project-Level PM Conformity is Needed *(check appropriate box)*

Categorical Exclusion (NEPA)		**EA or Draft EIS**	**FONSI or Final EIS**	**PS&E or Construction**	**Other**
	√				

Scheduled Date of Federal Action:

Current Programming Dates *as appropriate*

	PE/Environmental	**ENG**	**ROW**	**CON**
Start	(ongoing)	3/2008	3/2008	3/2009
End	3/2008	11/2008	3/2009	11/2010

Project Purpose and Need (Summary): *(attach additional sheets as necessary)*

I-405 is one of the most heavily traveled freeways in California. Daily traffic volumes in the vicinity of the Wilmington Avenue Interchanges have exceeded 200,000. Commercial and residential developments of the properties along Wilmington Avenue, Carson Street, and Sepulveda Boulevard have increased traffic volume on Wilmington Avenue at the I-405 interchange. Currently, traffic congestion occurs on the ramps of this interchange during both the AM and PM peak hours. According to the City of Carson General Plan EIR, Wilmington Avenue from 223rd Street to I-405 Freeway is operating at the Level of Service (LOS) E or F during both AM and PM peak hours. By 2020, the Wilmington Avenue from 223rd Street to I-405 and from I-405 to Carson Street would continue to operate at the LOS E or F during both AM and PM peak hours. Therefore, drivers would continue to experience added delays and stops if no improvements are made.

The City of Carson, in cooperation with Caltrans, intends to improve the traffic operation, alleviate the perennial traffic congestion, increase capacity, and improve safety by modifying the existing ramp configurations, adding a new northbound on-ramp, and widening the 223rd Street/Wilmington Avenue intersection. The project would help local and regional jurisdictions to better manage traffic issues in the surrounding areas.

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*
The project corridor is within a fully developed urban/industrial area in the City of Carson. There are single family homes located along southbound Wilmington Avenue, north of I-405 in the project area. The other land uses in the project vicinity (e.g., south of I-405 and east of Wilmington Avenue, within a 1-mile distance from the project corridor) are either industrial or commercial.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Roadway Segment	LOS AM/PM	
	No Build	Build
Wilmington Avenue		
North of I-405 Interchange	E/E	D/D
South of I-405 Interchange	F/F	C/C

Table 1. Comparison of Roadway Segments Traffic Conditions for the No Build and Build Alternative 2 (Opening Year 2011)

Roadway Segment	AADT (All Vehicles)			Truck AADT and Percentage				
				No Build		Build		
	No Build	Build	% AADT Change	AADT	% Trucks	AADT	% Trucks	% AADT Change
Wilmington Avenue								
North of I-405 Interchange	21,600	21,600	0	2,160	10	2,160	10	0
South of I-405 Interchange	31,500	31,500	0	3,150	10	3,150	10	0
I-405 Northbound Loop On-Ramp	4300	3100	-2.8	430	10	310	10	-2.8
I-405 New Northbound On-Ramp	--[a]	1200	--	--[a]	--	120	10	--
I-405 Northbound Off-Ramp	18,600	18,600	0	1,860	10	1,860	10	0
I-405 Southbound On-Ramp	17,700	17,700	0	1,770	10	1,770	10	0
I-405 Southbound Off-Ramp	6,000	6,000	0	600	10	600	10	0
I-405 West of Wilmington Avenue	275,600	275,600	0	27,560	10	27,560	10	0
I-405 East of Wilmington Avenue	302,100	302,100	0	30,210	10	30,210	10	0

[a] *Proposed new on-ramp, Build Alternative 2. Build Alternative 2 was considered to provide most conservative impact analysis.*

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Roadway Segment	LOS AM/PM	
	No Build	Build
Wilmington Avenue		
North of I-405 Interchange	F/F	D/D
South of I-405 Interchange	F/F	D/D

Table 2. Comparison of Roadway Segments Traffic Conditions for the No Build and Build Alternative 2 (Horizon Year 2030)

Roadway Segment	AADT (All Vehicles)			Truck AADT and Percentage				
				No Build		Build		%
	No Build	Build	% AADT Change	AADT	% Trucks	AADT	% Trucks	AADT Change
Wilmington Avenue								
North of I-405 Interchange	25,500	25,500	0	2,550	10	2,550	10	0
South of I-405 Interchange	37,200	37,200	0	3,720	10	3,720	10	0
I-405 Northbound Loop On-Ramp	5,100	3,700	-2.7	510	10	370	10	-2.7
I-405 New Northbound On-Ramp	--[a]	1,400	--	--[a]	--	140	10	--
I-405 Northbound Off-Ramp	21,900	21,900	0	2,190	10	2,190	10	0
I-405 Southbound On-Ramp	20,900	20,900	0	2,090	10	2,090	10	0
I-405 Southbound Off-Ramp	7,100	7,100	0	710	10	710	10	0
I-405 West of Wilmington Avenue	325,000	325,000	0	32,500	10	32,500	10	0
I-405 East of Wilmington Avenue	356,300	356,300	0	35,630	10	35,630	10	0

[a] *Proposed new on-ramp, Build Alternative 2.*

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

The proposed Build Alternatives would not cause changes in cross-streets AADT, truck volume, percent or AADT compared to the No Build condition. The project improvements would affect the intersections by reducing delay time and v/c ratio, and improving the intersections LOS, as shown in the following tables.

Table 3. Comparison of Intersection Traffic Conditions for the No Build and Build Alternative 2 (Opening Year 2011)

Intersection/ Roadway Segment	Peak Hour	Opening Year - 2011					
		No Build Alternative			Build Alternative 2		
		LOS	Delay/ Vehicle	V/C	LOS	Delay/ Vehicle	V/C
220th Street/ Wilmington Avenue	AM	C	26.8	0.87	A	6.6	0.48
	PM	C	27.8	0.88	B	12.6	0.76
Northbound Ramps/ Wilmington Avenue	AM	C	21.6	0.93	B	10.3	0.72
	PM	C	21.6	0.92	A	7.8	0.70
Southbound Ramps/ Wilmington Avenue	AM	C	33.3	1.09	B	11.4	0.59
	PM	C	33	1.08	B	10.6	0.66
223rd Street/ Wilmington Avenue	AM	D	40.5	0.91	C	23.8	0.87
	PM	F	88.8	1.26	D	45.7	1.03

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Table 4. Comparison of Intersection Traffic Conditions for the No Build and Build Alternative 2 (Horizon Year 2030)

Intersection/ Roadway Segment	Peak Hour	Horizon Year - 2030					
		No Build Alternative			Build Alternative 2		
		LOS	Delay/ Vehicle	V/C	LOS	Delay/ Vehicle	V/C
220th Street/ Wilmington Avenue	AM	D	52.0	0.93	A	7.6	0.57
	PM	D	52.0	0.93	C	22.7	0.91
Northbound Ramps/ Wilmington Avenue	AM	D	54.4	0.97	B	10.7	0.81
	PM	D	54.4	0.97	B	14.3	0.81
Southbound Ramps/ Wilmington Avenue	AM	E	77.2	1.23	B	15.0	0.73
	PM	E	77.2	1.23	C	17.6	0.75
223rd Street/ Wilmington Avenue	AM	E	68.2	1.03	C	28.0	0.98
	PM	F	140.1	1.54	E	74.2	1.23

Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)*

The proposed project would provide improvements at the interchange of I-405 and Wilmington Avenue to improve existing traffic condition and to facilitate the projected future traffic volume increase in the area. Currently traffic condition at intersections in the study area is poor and expected to deteriorate with traffic growth. The proposed improvements include changes along Wilmington Avenue from 223rd Street to north of 220th Street; at the ramps intersections; and the northbound entrance ramps to the freeway. The proposed Alternative 2 (which is considered here to provide a conservative analysis of impacts) would add a new on-ramp to northbound I-405, to provide a more direct route between Wilmington Avenue and I-405.

Roadway Segments

The project would not impact highway traffic volume or traffic mix, and it would not affect the diesel truck percentage or volume on Wilmington Avenue. Proposed Alternative 2 would add a new on-ramp and remove the southbound traffic left-turn at the intersection of Wilmington Avenue/ I-405 loop on-ramp. Improvements to the existing ramps would only affect the arterial ends. The project traffic study (Parsons, 2007) indicates that the Wilmington Avenue traffic is significantly impacted by the long queues at the ramps connections and intersections, particularly during peak hour traffic. As a result of the excessive queues, lane flow rates are dramatically reduced and would deteriorate further with the No Build condition. Adding the new on-ramp from southbound Wilmington Avenue would relieve traffic congestion on Wilmington Avenue by removing the left-turn queue at the existing loop on-ramp intersection. Furthermore, addition of a new northbound through lane would improve the vehicles traffic speed on Wilmington Avenue.

These improvements in access would reduce delays in traffic thereby providing the benefit of improved air quality in the project area. Tables 1 and 2 include comparison of daily traffic volumes with and without the project for the years 2011 and 2030, respectively. Based on the traffic study, the trucks percentage is projected to be 10 percent along the interchange and would not be affected by the project. The proposed new on-ramp would carry a relatively small traffic volume and therefore, would not increase the potential for generating PM hot spots.

Intersections

As a result of proposed project improvements, delay due to traffic congestion at the project intersections would be greatly reduced, and the average vehicle travel speed would slightly increase. Both of these effects would translate into a decrease in vehicle emissions. In 2030, the LOS at the intersections within the project area would be improved by implementing the proposed Build Alternative 2. Tables 3 and 4 compare the peak-hour intersection conditions of the No Build and Build Alternative 2, for 2011 and 2030, respectively. As shown, for all the studied intersections, LOS, delay and vehicle to capacity (v/c) ratio would improve compared to the No Build Alternative in opening year 2011, and horizon year 2030.

An emissions increase of PM would occur when the project results in a significant increase in ADT and VMT in the project area and/or an increase in traffic congestion and delays. The delay would be mostly at intersections where vehicles are accumulating and idling. It is unlikely that PM hot spots would be generated as a result of the proposed action because local accumulation and delay of vehicles would be reduced by the project. Specifically, proposed Alternative 2 would relieve congestion at the southbound Wilmington Avenue/on-ramp intersection by providing a new on-ramp that would remove the left turn at the southbound Wilmington Avenue and existing loop on-ramp intersection. The proposed project would not increase diesel truck percentages in the project area, and there would not be any increase in VMT as a result of the project. Thus, the project is not expected to cause any concern with respect to localized concentrations of $PM_{2.5}$ or PM_{10}.

In conclusion, the proposed project would improve the operations of the intersections and increase the vehicle speed in the project area. Accordingly, it is unlikely that PM emissions associated with the proposed action would cause significant adverse impacts to the existing air quality.

Comments/Explanation/Details *(attach additional sheets as necessary)*

The proposed project is in a nonattainment area for federal $PM_{2.5}$ and PM_{10} standards. Therefore, per 40 CFR Part 93 analyses are required for conformity purposes. However, the EPA does not require hotspot analyses, qualitative or quantitative, for projects that are not considered as POAQC, per the definition of section 93.123(b)(1). The I-405/Wilmington Avenue Interchange Improvements project does not qualify as a POAQC because of the following reasons:

i. The proposed project is not a new or expanded highway project. It would not impact highway traffic volume or traffic mix. The new northbound on-ramp would only improve the traffic conditions by eliminating the left turn queue of southbound Wilmington-to-northbound I-405 loop on-ramp, and redirecting the associated traffic to a right turn. The proposed project improvements include roadway widening and interchange improvements, but would not increase the traffic of the surrounding roadways/highways. This type of project improves roadway operations by reducing traffic congestion and reducing delay time per vehicle. Based on the Traffic Study (Parsons, 2007), the proposed project would not increase the traffic volumes along the local roadways. The traffic volume along the proposed segment of Wilmington Avenue would be well below the 125,000 average daily trips (ADT) threshold for a POAQC. Similarly, based on project traffic study, even with the 10% truck traffic, the truck volume would be below the 10,000 truck ADT threshold for POAQC.

ii. The proposed project would not affect intersections that are at level of service (LOS) D, E, or F with a significant number of diesel vehicles. The purpose of the proposed project is to improve the existing condition by reducing the congestion and delay time per vehicle and/or improving the LOS at intersections within the project vicinity. The LOS conditions in the project vicinity with and without the proposed project are shown in Tables 3 and 4.

iii. The proposed project does not include the construction of a new bus or rail terminal.

iv. The proposed project does not expand an existing bus or rail terminal.

Therefore, the proposed project meets the Clean Air Act requirements and 40 CFR 93.116 without a qualitative hot-spot analysis pursuant to FHWA and USEPA *Transportation Conformity Guidance for Qualitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas*. The proposed project would not create a new, or worsen an existing, PM_{10} or $PM_{2.5}$ violation.